

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Microsemi

Arizona Manufacturing Extension Partnership

Microsemi Streamlines Processes

Client Profile:

Microsemi manufactures a full-range of qualified high reliability medical, military and aerospace products that provide solutions in the functional areas of protection devices to isolate systems from environmental threats, power management, radio frequency microwave transmission and power conditioning. The company employs 400 people at its facility in Scottsdale, Arizona.

Situation:

Microsemi operates in a very competitive semiconductor industry, and since they build high specialized devices for the military and medical industries their products need to be on time and of the best quality. The company has struggled in the assembly and test areas due to antiquated equipment, inefficient plant layout, and poor processes. Microsemi realized that optimizing their flows and improving their assembly operations would be the first steps towards a more efficient factory. The company contacted the Arizona Manufacturing Extension Partnership (Arizona MEP), a NIST MEP network affiliate, to address the issue.

Solution:

The Arizona MEP developed a plan to train key employees to lead future improvements projects. Microsemi management and first line leaders attended a Basics of Lean manufacturing workshop to learn the key components of a successful Lean endeavor. Arizona MEP project managers then facilitated a Value Stream Mapping (VSM) exercise to determine what areas to focus the Kaizen events. The VSM looked into how long it took to prepare die lots for release into production. Three follow-on Kaizens addressed on-time delivery, inaccurate or incomplete inspection paperwork, and burn-in lots not completed when the product was due to ship. The VSM highlighted the weaknesses in the process; however, within the current system, changes were made to lessen the effect until fab improvements could lead to better yields. Kaizen changes included improved cycle time by eliminating duplicate operations at oven; simplification of paperwork; moving critical steps closer to assembly; elimination of sign off; improved checklist, visual aids and standard work; and roll out of 5S (Sort, Set in Order, Shine, Standardize, Sustain) to improve plant layout. Microsemi's Environmental Health & Safety Manager Ray Headings said, "The largest benefit of this Lean exercise is not the direct benefits, but the additional push toward team awareness, team efficiency, and the cultural change that took place in the organization."

Results:

- * Reduced waste by 40 percent.
- * Reduced overtime by 70 percent.
- * Reduced schedule changes due to rush jobs by 50 percent.

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- * Improved cycle time by 5 weeks by eliminating duplicate operations.
- * Improved quality assurance process cycle time by 3 days

Testimonial:

"I felt that this activity with the Arizona MEP had the right mix of theory with the right respect for our employees, processes and ultimate execution. I highly recommend inviting Arizona MEP into your facility if you are committing to Lean deployment."

Ray Headings , EHS Manager